

## **CLAIMS**

What is claimed is:

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1. A spinal bone implant, comprising:

a bone implant body including

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a superior end face;

an inferior end face;

an outer sidewall extending between said superior end face and said inferior end

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face, said outer sidewall including at least two flat sidewall portions;

a first insertion pin hole on a first flat sidewall portion; and

a second insertion pin hole on a second flat sidewall portion at an angle of about

30 degrees to said first insertion pin hole.

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2. The implant of claim 1, wherein said first insertion pin hole and said second insertion pin hole each include a counter bore cut.

3. The implant of claim 1, wherein a first inside pin surface of said first insertion pin hole and a second inside pin surface of said second insertion pin are smooth.

4. The implant of claim 1, further including tiered concentric cuts on said superior end face and said inferior end face.

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5. The implant of claim 4, wherein said concentric cuts are rectangular shaped.

6. The implant of claim 4, wherein said concentric cuts are tiered upwards relative to a central axis from said outer sidewall and tiered downwards relative to said central axis towards a center of said bone implant body.

7. The implant of claim 4, wherein said concentric cuts are repeatedly tiered upwards relative to said central axis from said outer sidewall and tiered downwards relative to said central axis towards a center of said bone implant body.
8. The implant of claim 1, 4, 5, 6, or 7, further including cuts extending radially from  
5 said outer sidewall to said center of said bone implant body across said superior end face and said inferior end face.
9. The implant of claim 1, further including an inner sidewall extending between said superior end face and said inferior end face, defining a hollow core.
10. The implant of claim 1, wherein said bone implant body is made of bone.
- 10 11. The implant of claim 10, wherein said outer sidewall maintains a natural shape of bone.
12. The implant of claim 1, wherein said superior end face and said inferior end face are tapered from a first height of said outer sidewall to a second height of said outer sidewall.
- 15 13. A spinal implant, comprising:  
a bone implant body including  
a superior end face;  
20 an inferior end face;  
an outer sidewall extending between said superior end face and said inferior end face, said outer sidewall including at least two flat sidewall portions; and  
25 concentric cuts on said superior end face and said inferior end face.
14. The implant of claim 13, wherein said concentric cuts are tiered.
15. The implant of claim 14, wherein said concentric cuts are rectangular shaped.

16. The implant of claim 14, wherein said concentric cuts are tiered upwards relative to a central axis from said outer sidewall and tiered downwards relative to said central axis towards a center of said bone implant body.

17. The implant of claim 14, wherein said concentric cuts are repeatedly tiered upwards  
5 relative to said central axis from said outer sidewall and tiered downwards relative to said central axis towards a center of said bone implant body.

18. The implant of claim 13, further including an inner sidewall extending between said superior end face and said inferior end face, defining a hollow core.

19. The implant of claim 13, further including a first insertion pin hole on a first flat  
10 sidewall portion and a second insertion pin hole on a second flat sidewall portion.

20. The implant of claim 19, wherein said insertion pin holes include a counter bore cut.

21. The implant of claim 19, wherein a first inside pin surface of said first insertion pin hole and a second inside pin surface of said second insertion pin are smooth.

22. The implant of claim 13, wherein said outer sidewall maintains a natural shape of  
15 bone.

23. The implant of claim 13, wherein said superior end face and said inferior end face are tapered from a first height of said outer sidewall to a second height of said outer sidewall.

24. A spinal implant, comprising:  
20 a bone implant body including

a superior end face;

25 an inferior end face;

an outer sidewall extending between said superior end face and said inferior end face, said outer sidewall including at least two flat sidewall portions; and cuts extending radially from said outer sidewall to a center of said bone implant body across said superior end face and said inferior end face.

- 5 25. The implant of claim 24, further including tiered concentric cuts on said superior end face and said inferior end face.
26. The implant of claim 25, wherein said concentric cuts are rectangular shaped.
27. The implant of claim 25, wherein said concentric cuts are tiered upwards relative to a central axis from said outer sidewall and tiered downwards relative to said central axis towards a center of said bone implant body.
- 10 28. The implant of claim 24, wherein said concentric cuts are repeatedly tiered upwards relative to said central axis from said outer sidewall and tiered downwards relative to said central axis towards a center of said bone implant body.
29. The implant of claim 24, further including an inner sidewall extending between said superior end face and said inferior end face, defining a hollow core.
- 15 30. The implant of claim 24, further including a first insertion pin hole on a first flat sidewall portion and a second insertion pin hole on a second flat sidewall portion.
31. The implant of claim 30, wherein said first insertion pin hole and said second insertion pin hole each include a counter bore cut.
- 20 32. The implant of claim 30, wherein a first inside pin surface of said first insertion pin hole and a second inside pin surface of said second insertion pin are smooth.
33. The implant of claim 24, wherein said outer sidewall maintains a natural shape of bone.

34. The implant of claim 24, wherein said superior end face and said inferior end face are tapered from a first height of said outer sidewall to a second height of said outer sidewall.

35. A spinal implant, comprising:

a bone implant body including

a superior end face;

an inferior end face;

an outer sidewall extending between said superior end face and said inferior end face, said outer sidewall including at least two flat sidewall portions; and

at least one pin hole on said flat sidewall portions including stress relief means

for relieving stress applied by a pin disposed in said pin hole.

36. The implant of claim 35, wherein said stress relief means includes a counter bore cut defining a distal end portion of said pin hole relative to a center of said implant.

37. A method of forming a spinal implant, comprising the step of:

cutting concentric cuts into a superior end face and an inferior end face of an implant.

38. The method of claim 37, wherein said cutting step includes cutting tiered concentric cuts.

39. A method of forming a spinal implant, comprising the step of:

cutting radial cuts into a superior end face and an inferior end face of an implant.

40. A method of forming a spinal implant, comprising the steps of:

(a) cutting concentric cuts into a superior end face and an inferior end face of an implant; and

(b) cutting radial cuts into said superior end face and said inferior end face of an implant.

41. The method of claim 40, wherein said first cutting step includes cutting tiered concentric cuts.